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TITLE: GAMING SYSTEM EMPLOYING BOTH ACTION FIGURE AND VIDEO GAME PLAY

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DOC NO.: G711

BACKGROUND OF THE INVENTION

The invention relates to a gaming system. More particularly the invention relates to a system that allow scored play with action figures whereas the score achieved by a player during video game play alters the competitive advantage of the player during action figure play.

During the past few decades, video game imagery has evolved from mere blips on a black and white video screen to photorealistic images. Video game controllers have evolved from a simple, four-way-switch joystick to precision pressure-sensitive controllers and virtual reality sensors that register movements of the player's body. Processing

power inherent in gaming systems allow complex game play with numerous three dimensional objects following complex trajectories and allow multi-level game play between players in different parts of the world. One fact remains, however, that video game play still remains an interaction on the video game screen.

Real world toys, have had a similar, although separate evolution. The action figures of decades past, that had spring-loaded releasing parts, or talked when a string was pulled and released, have been overshadowed by microchip controlled toys of today.

With all of the advances in both video game and action figure toys, however, little development has taken place to join video game and action figure play.

United States Patent No. 6,283,862 to Richter ("Richter") discloses a computer controlled game system. Richter projects an image into a projection zone, and registers movement in a portion of the projection zone using an electromagnetic beam. Richter, however, does not employ action figure play and only allows game play to take place in the vicinity of the projection zone.

United States Patent No. 6,322,365 to Shechter et al. ("Shechter") discloses a network-linked laser target firearm

training system. Schecter is an involved system that allows target shooters to competitively linked via a computer network between distinct geographic locations. Schecter, however, is strictly intended for target shooting at a fixed target that is hardwired to one of the networked general purpose computers.

United States Patent No. 5,589,945 to Abecassis ("Abecassis") discloses a computer-themed playing system. In particular, Abecassis discloses a video playback system that allows random access to a variety of video segments, according to choices by the user. Abecassis suggests a possible use for interactive video game play, whereas content may be selected "responsive to the logic of the interactive video game software". Abecassis, however, neither describes how such interactive video game play is to be carried out, nor suggests any incorporation of such technology with action figure play.

United States Patent Nos. 6,171,190 and 6,323,838 to Thanasack et al. ("Thanasack") disclose a photosensitive input peripheral device in a personal computer-based video gaming platform. In particular, Thanasack discloses a system that allows a video monitor to be used as a target for a light sensitive device.

United States Patent No. 6,261,180 to Lebensfeld et al. ("Lebensfeld") discloses a computer programmable interactive toy for a shooting game. In particular, Lebensfeld et al. discloses a portable interactive toy that includes a gun, target, and data module. The toy interacts with the base unit to communicate shots fired and hits of various players. In essence, Lebensfeld describes a variation of a "laser tag" game, but does not disclose a system that allows interactive play between action figures controlled by the players.

United States Patent No. 5,375,47 to Fromm et al. ("Fromm") discloses a toy assembly. In particular, Fromm et al. discloses a toy figurine that is structured with a toppling mechanism for causing the figurine to topple over when a beam of light associated with a toy gun is detected thereby. Fromm, however, does not disclose any mechanism for even keeping score, no less any features that facilitate integration with a more advanced gaming system.

In a similar regard as Fromm, United States Patent No. 6,071,166 to Lebensfeld et al. discloses a pair of light shooting and detecting toy figures. In particular, Lebensfeld discloses a pair of figures that are held by the user and which are each capable of both emitting a beam of light and sensing a beam of light incident thereupon from the other figure. The figures of Lebensfeld, however, are

intended to be hand-held – severely limiting the manner of play.

United States Patent Nos. 5,738,584 to Ikematsu et al. ("Ikematsu") and 5,785,592 to Jacobsen both disclose interactive target game systems that employ light emitters and detectors to allow "shooting gallery" type game play. United States Patent No. 5,904,621 to Small et al. ("Small") discloses an electronic game with infrared emitter and sensor that is essentially a variation of popular laser tag systems.

While these units may be suitable for the particular purpose employed, or for general use, they would not be as suitable for the purposes of the present invention as disclosed hereafter.

SUMMARY OF THE INVENTION

It is an object of the invention to provide a gaming system that employs action figures that interact in simulated battle scenarios. Accordingly, the action figures have simulated guns that emit light, have detectors that sense the presence of light incident from another of the action figures upon a target region, and have means for scoring "hits" thus detected by each of the figures.

It is another object of the invention to provide a gaming system that allows mobility of the gaming figures for realistic interaction between the figures. Accordingly, the figures are selectively seated upon a vehicle; and both mobility of the vehicle and the firing of the guns are controllable by the player with a hand-held remote control. The figures may also be removed from the vehicle and used in a standing position.

It is yet another object of the invention to provide a gaming system that provides visual feedback when one of the figures is hit. Accordingly, the figures are configured to break apart when they are hit.

It is yet a further object of the invention to provide a gaming system that integrates game play between video game play and subsequent action figure play. Accordingly, the

score a player achieves during video game play is transferred to the action figures, and helps determine the vulnerability of the action figures to hits from the other figures and the ability of the action figure to hit and destroy other players. Accordingly, when light from another figure's gun is detected by one of the figures, it will only score a hit and destroy the attacked figure if the attacking figure has a higher score than the attacked figure.

It is a further object of the invention that the strength of the action figures are readily visible thereon at the option of the player. Accordingly, each figure has a display that can be used to display the strength achieved/accumulated by the player. The player may selectively enable or disable such display using the remote control.

It is a still further object of the invention to provide a mode that allows the action figures to compete irrespective of their strength/score. Accordingly the action figures can selectively and voluntarily enter a quick draw mode. Once in the quick draw mode, the first action figure to strike the target of the other action figure will destroy the attacked action figure, even if the attacked action figure has a higher score.

The invention is a gaming system that employs a video game system and action figures to allow both video game play and action figure play. A video game score, obtained by a player through video game play, may be transferred to the action figure associated with that player to become the action figure score of that action figure. The action figures have a gun that generates a light beam and a target detector for receiving light beams from other action figures. The action figure will register a hit, and break apart, if its target detector receives a light beam from another action figure that has a higher action figure score.

To the accomplishment of the above and related objects the invention may be embodied in the form illustrated in the accompanying drawings. Attention is called to the fact, however, that the drawings are illustrative only. Variations are contemplated as being part of the invention, limited only by the scope of the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings, like elements are depicted by like reference numerals. The drawings are briefly described as follows.

FIG 1 is a front elevational view of an action figure according to the present invention, in the standing position.

FIG 2 is a side elevational view of the action figure seated on a vehicle, wherein the action figure and vehicle are controlled with a hand-held remote control.

FIG 3 is a cross sectional view, illustrating an attachment mechanism that selectively attaches upper and lower portions of the action figure, that selectively detaches when the action figure is "hit" by incoming fire.

FIG 4 is a cross sectional view, similar to FIG 3, except wherein the attachment mechanism has released, causing the upper portion of the action figure to repel from the lower portion of the action figure.

FIG 5 is a block diagram, illustrating interconnection between the hand-held remote control, and the action figure and vehicle.

FIG 6 is a block diagram, illustrating the video game portion of the present invention.

FIG 7 is a flow diagram, illustrating steps by which video game and action figure play is integrated.

FIG 8 is a flow diagram, illustrating a battle sequence of action figure play.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Within the following description, a gaming system is described that integrates video game play, using a video game system, with action figure play. According to the present invention, skillful play during video game play helps a player achieve a competitive advantage during action figure play.

FIG 1 illustrates an action figure 20 that forms a part of the gaming system according to the present invention. In particular, during action figure play, one of the action figures is associated with each player. Each action figure may take on a variety of shapes but has a generally humanoid shape and appearance, having a waist 22 that separates an upper portion 24 and lower portion 26. The action figure 20 has a pair of arms 28 and a light producing gun 30 attached to one of the arms 28 that selectively produces a highly directional light beam. The action figure has a front 20F and a rear 20R. The action figure has at least one detector target 32, preferably located on the front 20F, on the upper portion 24. The detector target 32 is capable of detecting the light beam from the light producing gun 30 of other action figures. It should be noted that within the scope of the present invention, the light beam may be visible light, and may also be infrared, ultraviolet, or other forms of electromagnetic radiation that has the directional